WHAT IS CLAIMED IS:

1. A method to establish an adjustable on-chip impedance within a predetermined range, the method comprises:

establishing a reference current for the adjustable on-chip impedance;

sensing a voltage produced by applying the reference current to the adjustable on-chip impedance;

comparing the sensed voltage with a reference voltage; and

tuning the adjustable on-chip impedance when the comparison of the sensed voltage and the reference voltage is unfavorable, such that an impedance value of the adjustable on-chip impedance is within predetermined range that accounts for variance of the reference current and the reference voltage.

2. The method of Claim 1 further comprises setting the impedance value of the adjustable on-chip impedance to an initial value prior to applying the reference current to the adjustable on-chip impedance.

3. The method of claim 2, wherein the initial value of the adjustable on-chip impedance comprises at least one of a minimum impedance value, a maximum impedance value, and a nominal impedance value.

4. The method of Claim 1, wherein tuning the adjustable on-chip impedance further comprises:

changing the impedance value to produce an altered impedance value;

applying the reference current to the adjustable on-chip impedance having the altered impedance;

sensing the voltage produced by applying the reference current to the adjustable on-chip impedance having the altered impedance; and

comparing the sensed voltage with the reference voltage, wherein tuning the adjustable on-chip impedance continues when the comparison of the sensed voltage and the reference voltage is unfavorable.

5. The method of claim 1, wherein tuning the adjustable on-chip impedance further comprises:

determining a voltage difference between the sensed voltage and the reference voltage; and

determining an impedance adjustment to the adjustable on-chip impedance based on the voltage difference.

6. The method of claim 1, wherein comparing the sensed voltage with a reference voltage further comprises:

comparing the sensed voltage with a first reference voltage, wherein the first reference voltage corresponds to a low threshold of the range of acceptable impedance values; and

comparing the sensed voltage with a second reference voltage, wherein the second reference voltage corresponds to a high threshold of the range of acceptable impedance values.

7. The method of claim 1, wherein the adjustable on-chip impedance corresponds to a termination resistor for universal serial bus (USB) transmit lines.

8. A calibration circuit to establish an impedance value of an adjustable on-chip impedance within a predetermined range, comprising:

a reference current source to provide a reference current, which is applied across the adjustable on-chip impedance;

a comparator operably coupled to sense and compare a voltage generated across the adjustable on-chip impedance, and a reference voltage, and wherein the comparator provides an output that indicates when the comparison of the sensed voltage and the reference voltage is unfavorable; and

a tuning module to receive the output of the comparator and to increment the adjustable on-chip impedance when the comparison of the sensed voltage and the reference voltage is unfavorable such that an impedance value of the adjustable on-chip impedance is within a predetermined range that accounts for variance of the reference current and the reference voltage.

9. The calibration circuit of Claim 8, wherein the reference current and reference voltage derive from a bandgap voltage reference.

10. The calibration circuit of Claim 8, wherein the reference current source comprising a current mirror, which provides at least some of the variance of the reference current.

11. The calibration circuit of Claim 9, wherein:

the tuning module changes the impedance value to produce an altered impedance value of the adjustable on-chip impedance to which the reference current is applied;

the comparator compares the sensed voltage produced by applying the reference current to the adjustable on-chip impedance and the reference voltage; and

wherein tuning module continues to change the adjustable on-chip impedance when the comparison of the sensed voltage and the reference voltage is unfavorable.

12. The calibration circuit of Claim 8, wherein the adjustable on-chip impedance corresponds to a termination resistor for universal serial bus (USB) transmit lines.